

Miller, Diane M. (CDC/NIOSH/EID)

From: Ken.Bobetich@MSANET.COM
Sent: Friday, March 28, 2008 9:00 PM
To: NIOSH Docket Office (CDC)
Subject: MSA Comments to PAPR Docket

Attachments: MSA PAPR Docket Comments 0308.doc



MSA PAPR Docket
Comments 0308....

The attached are MSA Comments to the PAPR Docket:

(See attached file: MSA PAPR Docket Comments 0308.doc)

**Ken Bobetich
Product Group Manager,
Industrial Protection Products
724.776.7718**



Mine Safety Appliances Company · P.O. Box 426 · Pittsburgh, PA · 15230-0426

Telephone: (724) 776-7718

March 24, 2008

NIOSH Docket Office
NIOSH Mailstop: C-34
PAPR – Docket #008
Robert A. Taft Lab.
4676 Columbia Parkway
Cincinnati, Ohio 45226

via email to nioshdocket@cdc.gov

Re: Powered Air-Purifying Respirator (PAPR) Standard – Concept Paper dated December 21, 2007 - NIOSH Docket No. 008

The Mine Safety Appliances Company (MSA) offers the following comments on the December 21, 2007 proposed concept paper for Powered Air-Purifying Respirators (PAPR) intended to establish performance requirements for PAPR devices under 42 CFR Part 84, Subpart P.

General Comment

MSA supports the overall concept of basic and enhanced requirements in order to draw the distinction between the expected use and application scenarios. However, we believe that some of the basic requirements are more elaborate than need to be prescribed for a basic unit and as such would dramatically increase the cost of such devices. With regard to general construction requirements, MSA believes that some of the language is too prescriptive for a performance-oriented document and that NIOSH should revisit those sections that impose design criteria. Additionally, the Standard Testing Procedures (STP) must be linked to the test requirements in future concept papers. Listing the test procedures also allows stakeholder to provide feedback, giving NIOSH adequate time to consider and address the comments without further delaying the development and implementation of its regulations.

Specific Comments:

MSA offers the following comments related to the specific sections of the December 21, 2007 draft concept paper, as noted below:

Section 2

It appears NIOSH may not be aware of all of the options for respiratory inlet coverings available today. We appreciate the use of this term by NIOSH, but the wording in the definitions does not reflect that there are both tight fitting and loose fitting facepieces, hoods and helmets. Accordingly, NIOSH should revisit the terms as used and defined to more accurately reflect the offerings of these products in the marketplace.

Section 4.1.2.1

The basic requirement for a Power Monitor is excessive and will cause devices to be more expensive and therefore less utilized.

Section 4.1.2.2

MSA believe that the basic requirement for a low pressure indicator is unnecessary since PAPRs are intended for routine use in atmospheres that are not IDLH. MSA acknowledges that products may include a device at the manufacturer's discretion and, as such, suggest the following language to reflect that alarms may be optional:

4.1.2.2 If a PAPR is equipped with an alarm, it shall alert the user, via a readily visible light or other means, when the airflow of the PAPR falls below the manufacturer's stated minimum design flow (MMDF) 30 or more seconds. It shall be readily detectable to the wearer during use without manipulation of the respirator. Indicators that are actuated when pressure inside the respiratory inlet covering falls below the manufacturer's stated minimum for 30 or more seconds are also acceptable.

Section 4.1.6.2

It is recommended that this paragraph be deleted. Evaluating common safety and/or corrective eyewear for interference is not measurable. Interference of equipment depends on the specific eyewear and the user's facial characteristics and is best addressed during selection and fitting of the device as required by OSHA.

Section 4.1.6.5

MSA recommends removing the statement regarding the marking of helmets not designed to offer head protection. Marking helmets that are not impact resistant, as proposed in the concept paper, would conflict with ANSI Z89.1, which requires marking to identify compliant head protection. Cautionary language in the user instructions will tell users if the helmet does not offer head protection. As such, the subsection should be revised to read:

Helmets designed to provide head protection shall meet the requirements of ANSI Z89.1-2003. [NOTE: The 2003 version is undergoing revision and an updated version, designated ANSI/ISEA Z89.1 is expected in final, published form in 2008.]

Section 4.1.7.1.1

Requiring an average Visual Field Score (VFS) of 90 or greater for respiratory inlet coverings limits the ability to provide welding versions of these devices with a reduced field of vision.

Section 4.1.7.2

The requirement of the standard for Optically corrected lenses and visors for Facepieces, Hoods, helmets, Visors would dramatically limit the styles and types of eye protection available.

MSA recommends removing the statement regarding the marking of lenses that are not impact resistant. To do so, as proposed in the concept paper, would conflict with ANSI Z87.1 which imposes requisite marking on compliant eye protection. Cautionary language in the user instructions will tell users if the lens does not offer impact protection. As such, the subsection should be revised to read:

Helmets designed to provide head protection shall meet the requirements of ANSI Z87.1-2003. [NOTE: The 2003 version is undergoing revision and an updated version, designated ANSI/ISEA Z879.1 is expected in final, published form in 2008.]

Section 4.1.9

MSA questions why a low pressure indicator is needed for PAPRs, when even the current SCBA standard does not include the requirement for a low pressure alarm inside the RIC that detects when pressure inside the RIC falls below ambient during more than twelve consecutive breaths of blower operation. Because PAPRs are not approved for IDLH Atmospheres, we find this requirement to be excessive.

Section 4.1.10.3

Active low power warning when unit can no longer provide 15 min of additional adequate power at the lowest recommended temperature at the highest flow. This will likely cause alarming at very premature levels under normal working conditions

Section 4.1.13

MSA requests clarification of the requirement for an FMEA. Specifically, if NIOSH will be responsible for judging the FMEA as acceptable or unacceptable and if there will be defined qualifications for examiners.

Section 4.2.4.2

MSA requests NIOSH clarify the statement that "Pressure shall remain above ambient at all times during testing. Static pressure relative to external pressure may not exceed 2" of water column height for any PAPR during testing." It is unclear what is meant by "static pressure and there appears to conflict with other statements in the standard.

Section 4.2.5.1

NIOSH should consider specifying criteria for the head form to be used. Current CO2 testing is very much affected by the person donning the RIC on the test head. Given that there a number of test heads currently being used, NIOSH should identify the test head to be used and test the appropriate sized RIC on the appropriate sized test head.

Section 4.2.7.1.1

Results from our lab show that organic vapors desorbs off of cartridges which are at or near their adsorption capacity. For ammonia and possibly other chemisorbed agents, desorption is not so severe for cartridges with some remaining capacity. At any rate, the proposed NIOSH desorption test for PAPRs effectively adds an additional capacity requirement, in addition to the gas adsorption tests. This will result in an over design of the cartridge for users, with accompanying wastes in weight and cost. MSA does not recommend re-use of PAPR cartridges and warns against agent migration and desorption in the user instructions. Therefore, MSA recommends that the desorption test be removed from the NIOSH proposed PAPR concept.

Section 4.2.7.7.4

MSA believes that the maximum breakthrough concentration should be set to a concentration that can be measured reliability, similar to that for the canisters. Breakthrough concentrations for Table 3 and 4 should be consistent with each other and with current detection limits. This is 10 ppm for cyclohexane and 10 ppm for hydrogen sulfide

Section 4.2.8

This constitutes still another filter designation for particulate filters and can lead to further confusion. We already have N,R,P, 95,99,100 and several of these categories do not have filters which are available commercially. Are the PAPR95 and PAPR100 filters N, R, or P Filters? NIOSH Specifically identifies P100 filters for Radiological and Biological agents, are PAPR100 filters P100 filters?

Section 4.2.10

MSA reiterates its desire for NIOSH to provide specifics for the practical performance testing in the next version to allow stakeholders an opportunity to offer comment. Such protocol should include the exercises to be performed and the criteria for panel members.

Section 6.1

NIOSH has not provided any details on the requirement for flammability and heat resistance. We recommend the test method in Section 8 of standard, EN 13274-4:2001, Respiratory Protective Devices, Methods of test, Part 4, Flame tests, Single burner moving specimen test: Method 3. The requirement in the two PAPR standards states: "No part of the device shall continue to burn after removal from the flame. The device is not required to meet the other requirements of this standard after being subjected to this test."

Kenneth V. Bobetich
Product Group Manager,
Industrial Protection Products